

=> d his

• (FILE 'HOME' ENTERED AT 15:58:28 ON 17 JUL 2002)

FILE 'REGISTRY' ENTERED AT 15:58:53 ON 17 JUL 2002

L1 1 S 3416-24-8/RN

L2 1 S 3616-42-0/RN

FILE 'CAOLD, CAPLUS, CROPUS, DGENE, DPCI, ENCOMPPAT, ENCOMPPAT2, EUROPATFULL, IFIPAT, INPADOC, JAPIO, PAPERCHEM2, PATDD, PATDPA, PATOSDE, PATOSEP, PATOSWO, PCTFULL, PIRA, RAPRA, SYNTHLINE, TULSA, TULSA2, USPATFULL, USPAT2, WPIDS' ENTERED AT 16:04:01 ON 17 JUL 2002

FILE 'REGISTRY' ENTERED AT 16:04:20 ON 17 JUL 2002

L3 SET SMARTSELECT ON

SEL L1 1- CHEM : 12 TERMS

SET SMARTSELECT OFF

FILE 'CAOLD, CAPLUS, CROPUS, DGENE, DPCI, ENCOMPPAT, ENCOMPPAT2, EUROPATFULL, IFIPAT, INPADOC, JAPIO, PAPERCHEM2, PATDD, PATDPA, PATOSDE, PATOSEP, PATOSWO, PCTFULL, PIRA, RAPRA, SYNTHLINE, TULSA, TULSA2, USPATFULL, USPAT2, WPIDS' ENTERED AT 16:04:22 ON 17 JUL 2002

L4 31165 S L3

FILE 'REGISTRY' ENTERED AT 16:09:27 ON 17 JUL 2002

L5 SET SMARTSELECT ON

SEL L2 1- CHEM : 6 TERMS

SET SMARTSELECT OFF

FILE 'CAOLD, CAPLUS, CROPUS, DGENE, DPCI, ENCOMPPAT, ENCOMPPAT2, EUROPATFULL, IFIPAT, INPADOC, JAPIO, PAPERCHEM2, PATDD, PATDPA, PATOSDE, PATOSEP, PATOSWO, PCTFULL, PIRA, RAPRA, SYNTHLINE, TULSA, TULSA2, USPATFULL, USPAT2, WPIDS' ENTERED AT 16:09:29 ON 17 JUL 2002

L6 838 S L5

FILE 'REGISTRY' ENTERED AT 17:02:45 ON 17 JUL 2002

FILE 'CAOLD, CAPLUS, CROPUS, DGENE, DPCI, ENCOMPPAT, ENCOMPPAT2, EUROPATFULL, IFIPAT, INPADOC, JAPIO, PAPERCHEM2, PATDD, PATOSDE, PATOSEP, PATOSWO, PCTFULL, PIRA, RAPRA, SYNTHLINE, TULSA, TULSA2, USPATFULL, USPAT2, WPIDS' ENTERED AT 17:02:55 ON 17 JUL 2002

FILE 'REGISTRY' ENTERED AT 17:03:12 ON 17 JUL 2002

L7 1 S 9030-45-9/RN

FILE 'CAOLD, CAPLUS, CROPUS, DGENE, DPCI, ENCOMPPAT, ENCOMPPAT2, EUROPATFULL, IFIPAT, INPADOC, JAPIO, PAPERCHEM2, PATDD, PATOSDE, PATOSEP, PATOSWO, PCTFULL, PIRA, RAPRA, SYNTHLINE, TULSA, TULSA2, USPATFULL, USPAT2, WPIDS' ENTERED AT 17:03:33 ON 17 JUL 2002

FILE 'REGISTRY' ENTERED AT 17:03:42 ON 17 JUL 2002

L8 SET SMARTSELECT ON

SEL L7 1- CHEM : 17 TERMS

SET SMARTSELECT OFF

FILE 'CAOLD, CAPLUS, CROPUS, DGENE, DPCI, ENCOMPPAT, ENCOMPPAT2, EUROPATFULL, IFIPAT, INPADOC, JAPIO, PAPERCHEM2, PATDD, PATOSDE, PATOSEP, PATOSWO, PCTFULL, PIRA, RAPRA, SYNTHLINE, TULSA, TULSA2, USPATFULL, USPAT2, WPIDS' ENTERED AT 17:03:43 ON 17 JUL 2002

L9 595 S L8

L10 233 S L9 AND L6 AND L4

L11 228 DUP REM L10 (5 DUPLICATES REMOVED)

L12 131 S L11 AND (FERMENT? OR CULTUR? OR PREP? OR SYNTHES? OR MAK?)

L13 33 S L12 AND MICROORGANISM

L14 33 DUP REM L13 (0 DUPLICATES REMOVED)

L14 ANSWER 1 OF 33 CAPLUS COPYRIGHT 2002 ACS
 AN 2002:290716 CAPLUS
 DN 136:308625
 TI Process and materials for production of **glucosamine**
 IN Berry, Alan; Burlingame, Richard P.; Millis, James R.
 PA Arkion Life Sciences LLC, USA
 SO U.S., 84 pp., Cont.-in-part of Appl. No. PCT/us97/00800.
 CODEN: USXXAM

DT Patent
 LA English

FAN.CNT 3

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|---------------|--|----------|----------------|-----------------|----------|--|
| PI | US 6372457 | B1 | 20020416 | US 1998-115475 | 19980715 | |
| | WO 9830713 | A1 | 19980716 | WO 1998-US800 | 19980114 | |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | | |
| | WO 2000004182 | A1 | 20000127 | WO 1999-US15976 | 19990715 | |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | | |
| | AU 9951028 | A1 | 20000207 | AU 1999-51028 | 19990715 | |
| | EP 1095158 | A1 | 20010502 | EP 1999-935577 | 19990715 | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | | |
| JP 2002520067 | T2 | 20020709 | JP 2000-560279 | 19990715 | | |
| PRAI | US 1997-35494P | P | 19970114 | | | |
| | WO 1998-US800 | A2 | 19980114 | | | |
| | US 1998-115475 | A | 19980715 | | | |
| | WO 1999-US15976 | W | 19990715 | | | |

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 33 USPATFULL
 AN 2002:119321 USPATFULL
 TI HUMAN CARBOHYDRATE METABOLISM ENZYMES
 IN BANDMAN, OLGA, MOUNTAIN VIEW, CA, UNITED STATES
 HILLMAN, JENNIFER L., MOUNTAIN VIEW, CA, UNITED STATES
 LAL, PREETI, SANTA CLARA, CA, UNITED STATES
 GUEGLER, KARL J., MENLO PARK, CA, UNITED STATES
 GORGONE, GINA, PALO ALTO, CA, UNITED STATES
 CORLEY, NEIL C., MOUNTAIN VIEW, CA, UNITED STATES
 PATTERSON, CHANDRA, MOUNTAIN VIEW, CA, UNITED STATES
 BAUGHN, MARIAH R., SAN JOSE, CA, UNITED STATES

PI US 2002061301 A1 20020523
 AI US 1998-79892 A1 19980515 (9)

DT Utility
 FS APPLICATION

LN.CNT 3181

INCL INCLM: 424/094.500
 INCLS: 435/193.000; 435/006.000; 514/012.000; 530/387.100
 NCL NCLM: 424/094.500
 NCLS: 435/193.000; 435/006.000; 514/012.000; 530/387.100

IC [7]
ICM: C12Q001-68

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 3 OF 33 USPATFULL
AN 2002:48007 USPATFULL
TI **Novel glutamine: fructose-6- phosphate amidotransferase, its production and use**
IN Nishi, Kazunori, Tsukuba, JAPAN
Hikichi, Yukiko, Tsukuba, JAPAN
Shintani, Yasushi, Tsukuba, JAPAN
PA Takeda Chemical Industries, Ltd., Osaka, JAPAN (non-U.S. corporation)
PI US 2002028198 A1 20020307
AI US 2001-771838 A1 20010129 (9)
RLI Division of Ser. No. US 1998-182983, filed on 30 Oct 1998, GRANTED, Pat.
No. US 6207431
DT Utility
FS APPLICATION
LN.CNT 3815
INCL INCLM: 424/094.610
INCLS: 514/044.000
NCL NCLM: 424/094.610
NCLS: 514/044.000
IC [7]
ICM: A61K038-47
ICS: A61K048-00

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 4 OF 33 USPATFULL
AN 2001:43989 USPATFULL
TI **Glutamine:fructose-6-phosphate amidotransferase, its production and use**
IN Nishi, Kazunori, Tsukuba, Japan
Hikichi, Yukiko, Tsukuba, Japan
Shintani, Yasushi, Tsukuba, Japan
PA Takeda Chemical Industries, Ltd., Osaka, Japan (non-U.S. corporation)
PI US 6207431 B1 20010327
AI US 1998-182983 19981030 (9)
RLI Division of Ser. No. US 1997-911445, filed on 12 Aug 1997, now patented,
Pat. No. US 5876713
PRAI JP 1996-213944 19960813
DT Utility
FS Granted
LN.CNT 3177
INCL INCLM: 435/193.000
INCLS: 435/320.100; 435/252.300; 435/252.330; 536/023.200; 536/023.100
NCL NCLM: 435/193.000
NCLS: 435/252.300; 435/252.330; 435/320.100; 536/023.100; 536/023.200
IC [7]
ICM: C12N009-10
ICS: C12N015-00; C12N001-20; C07H021-04
EXF 536/23.1; 536/23.2; 435/320.1; 435/252.3; 435/193; 435/252.33
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 2001:634531 CAPLUS
DN 136:258038
TI Analysis of the chromosome sequence of the legume symbiont *Sinorhizobium meliloti* strain 1021
AU Capela, Delphine; Barloy-Hubler, Frederique; Gouzy, Jerome; Bothe, Gordana; Ampe, Frederic; Batut, Jacques; Boistard, Pierre; Becker, Anke; Boutry, Marc; Cadieu, Edouard; Dreano, Stephane; Gloux, Stephanie; Godrie, Therese; Goffeau, Andre; Kahn, Daniel; Kiss, Erno; Lelaure, Valerie; Masuy, David; Pohl, Thomas; Portetelle, Daniel; Puhler, Alfred; Purnelle, Benedicte; Ramsperger, Ulf; Renard, Clotilde; Thebault, Patricia; Vandenbol, Micheline; Weidner, Stefan; Galibert, Francis
CS Laboratoire de Biologie Moleculaire des Relations Plantes-Microorganismes,

Unite Mixte de Recherche (UMR) 215 Centre National de la Recherche Scientifique (CNRS), Institut National de la Recherche Agronomique, Chemin, Tolosan, F-31326, Fr.

SO Proceedings of the National Academy of Sciences of the United States of America (2001), 98(17), 9877-9882

CODEN: PNASA6; ISSN: 0027-8424

PB National Academy of Sciences

DT Journal

LA English

RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2002 ACS

AN 2000:68590 CAPLUS

DN 132:121532

TI **Glucosamine fermentation with recombinant microorganisms with mutations in the glucosamine-6-phosphate metabolic pathway**

IN Berry, Alan; Burlingame, Richard P.; Millis, James R.

PA DCV, Inc. D/B/A Bio-Technical Resources, USA

SO PCT Int. Appl., 151 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 2000004182 | A1 | 20000127 | WO 1999-US15976 | 19990715 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | US 6372457 | B1 | 20020416 | US 1998-115475 | 19980715 |
| | AU 9951028 | A1 | 20000207 | AU 1999-51028 | 19990715 |
| | EP 1095158 | A1 | 20010502 | EP 1999-935577 | 19990715 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| | JP 2002520067 | T2 | 20020709 | JP 2000-560279 | 19990715 |
| PRAI | US 1998-115475 | A | 19980715 | | |
| | US 1997-35494P | P | 19970114 | | |
| | WO 1998-US800 | A2 | 19980114 | | |
| | WO 1999-US15976 | W | 19990715 | | |

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 33 EUROPATFULL COPYRIGHT 2002 WILA

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

AN 1059354 EUROPATFULL ED 20001224 EW 200050 FS OS

TIEN Sequence-determined DNA fragments and corresponding polypeptides encoded thereby.

TIDE DNS-fragmente mit bestimmter Sequenz und die dadurch kodierte Polypeptide.

TIFR Fragments d'ADN avec des sequences determinees et polypeptides encodees par lesdits fragments.

IN Alexandrov, Nickolai, 1404 Oak Trail St., Thousand Oaks, CA 91320, US; Trouhan, Maxim E., 1675 Amberwood Dr. No. 2, South Pasadena, CA 91030, US

PA Ceres Incorporated, 3007 Malibu Canyon Road, Malibu, CA 90265, US

SO Wila-EPZ-2000-H50-T1a

DS R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE;

R IT; R LI; R LU; R MC; R NL; R PT; R SE; R AL; R LT; R LV; R MK; R RO;
R SI
PIT EPA2 EUROPÄISCHE PATENTANMELDUNG
PI EP 1059354 A2 20001213
OD 20001213
AI EP 2000-304943 20000612
PRAI US 1999-138540 19990610
US 1999-138847 19990610
IC ICM C12N015-29
ICS C12N015-82 C07K014-415 C12Q001-68 A01H005-00

L14 ANSWER 8 OF 33 EUROPATFULL COPYRIGHT 2002 WILA

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

AN 1033405 EUROPATFULL ED 20000917 EW 200036 FS OS
TIEN Sequence-determined DNA fragments and corresponding polypeptides encoded thereby.
TIDE DNS-fragmente mit bestimmter Sequenz und die dadurch kodierte Polypeptide.
TIFR Fragments d'ADN avec des sequences determinees et polypeptides encodees par lesdits fragments.
IN Alexandrov, Nickolai, 1404 Oak Trail St., Thousand Oaks, CA 91320, US;
Brover, Vyacheslav, 5916 N. Las Virgenes Rd. #590, Calabasas, CA 91302,
US;
Chen, Xianfeng, 1705 S. Westgate Ave. #2, Los Angeles, CA 90025, US;
Subramanian, Gopalakrishnan, 4205 Peach Slope Rd., Moorpark, CA 93021,
US;
Troukhan, Maxim E., 1675 Amberwood Dr. #2, South Pasadena, CA 91030, US;
Zheng, Liansheng, 12333 Wild Turkey Court, #B, Creve Coeur, MO 63141,
US;
Dumas, J., US
PA Ceres Incorporated, 3007 Malibu Canyon Road, Malibu, CA 90265, US
SO Wila-EPZ-2000-H36-T1a
DS R AT; R BE; R CH; R CY; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE;
R IT; R LI; R LU; R MC; R NL; R PT; R SE; R AL; R LT; R LV; R MK; R RO;
R SI
PIT EPA2 EUROPÄISCHE PATENTANMELDUNG
PI EP 1033405 A2 20000906
OD 20000906
AI EP 2000-301439 20000225
PRAI US 1999-121825 19990225
US 1999-123180 19990305
US 1999-123548 19990309
US 1999-125788 19990323
US 1999-126264 19990325
US 1999-126785 19990329
US 1999-127462 19990401
US 1999-128234 19990406
US 1999-128714 19990408
US 1999-129845 19990416
US 1999-130077 19990419
US 1999-130449 19990421
US 1999-130891 19990423
US 1999-130510 19990423
US 1999-131449 19990428
US 1999-132407 19990430
US 1999-132048 19990430
US 1999-132484 19990504
US 1999-132485 19990505
US 1999-132487 19990506
US 1999-132486 19990506
US 1999-132863 19990507
US 2000-176866 20000119
US 2000-176867 20000119
US 2000-176910 20000119
US 2000-178166 20000126

| | | |
|----|----------------|-------------|
| US | 2000-178545 | 20000127 |
| US | 2000-178547 | 20000127 |
| US | 2000-177666 | 20000127 |
| US | 2000-178546 | 20000127 |
| US | 2000-178544 | 20000127 |
| US | 2000-178754 | 20000128 |
| US | 2000-178755 | 20000128 |
| US | 2000-179388 | 20000201 |
| US | 2000-179395 | 20000201 |
| US | 2000-180139 | 20000203 |
| US | 2000-180039 | 20000203 |
| US | 2000-180206 | 20000204 |
| US | 2000-180207 | 20000204 |
| US | 2000-180696 | 20000207 |
| US | 2000-180695 | 20000207 |
| US | 2000-181214 | 20000209 |
| US | 2000-181228 | 20000209 |
| US | 2000-181551 | 20000210 |
| US | 2000-181476 | 20000210 |
| US | 2000-182478 | 20000215 |
| US | 2000-182477 | 20000215 |
| US | 2000-182516 | 20000215 |
| US | 2000-182512 | 20000215 |
| US | 2000-183166 | 20000217 |
| US | 2000-183165 | 20000217 |
| IC | ICM C12N015-29 | |
| | ICS C12N015-82 | C07K014-415 |
| | | C12Q001-68 |
| | | A01H005-00 |

L14 ANSWER 9 OF 33 USPATFULL
 AN 1999:27182 USPATFULL
 TI **Glutamine: fructose-6-phosphate amidotransferase, its production and use**
 IN Nishi, Kazunori, 16-1-402 Namiki 4-chome, Tsukuba, Ibaraki, Japan
 Hikichi, Yukiko, 21-2-1-504, Matsushiro 4-chome, Tsukuba, Ibaraki, Japan
 Shintani, Yasushi, 7-9-703, Kasuga 1-chome, Tsukuba, Ibaraki, Japan 305
 PI US 5876713 19990302
 AI US 1997-911445 19970812 (8)
 PRAI JP 1996-213944 19960813
 DT Utility
 FS Granted
 LN.CNT 3620
 INCL INCLM: 424/094.500
 INCLS: 514/012.000; 435/193.000
 NCL NCLM: 424/094.500
 NCLS: 435/193.000; 514/012.000
 IC [6]
 ICM: C12N009-10
 ICS: A61K038-45
 EXF 435/193; 424/94.5; 514/12
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L14 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2002 ACS
 AN 1998:493700 CAPLUS
 DN 129:121714
 TI **Process for production of N-glucosamine**
 IN Berry, Alan; Burlingame, Richard P.; Millis, James R.
 PA Bio-Technical Resources, USA; Berry, Alan; Burlingame, Richard P.; Millis, James R.
 SO PCT Int. Appl., 91 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 3

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| WO 9830713 | A1 | 19980716 | WO 1998-US800 | 19980114 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, | | | | |

DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG,
KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,
NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,
FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,
GA, GN, ML, MR, NE, SN, TD, TG

AU 9859604 A1 19980803 AU 1998-59604 19980114
US 6372457 B1 20020416 US 1998-115475 19980715
PRAI US 1997-35494P P 19970114
WO 1998-US800 W 19980114

L14 ANSWER 11 OF 33 EUROPATFULL COPYRIGHT 2002 WILA

PATENT APPLICATION - PATENTANMELDUNG - DEMANDE DE BREVET

AN 824149 EUROPATFULL ED 19980302 EW 199808 FS OS
TIEN **Glutamine: fructose-6-phosphate amidotransferase** (GFAT), its production and use.
TIDE **Glutamine: Fructose-6-Phosphate Amidotransferase** (GFAT), seine Herstellung und Verwendung.
TIFR **Glutamine: fructose-6-phosphate amidotransferase** (GFAT), sa production et son utilisation.
IN Nishi, Kazunori, 16-1-402, Namiki 4-chome, Tsukuba, Ibaraki 305, JP;
Shintani, Yasushi, 7-9-703, Kasuga 1-chome, Tsukuba, Ibaraki 305, JP;
Hikichi, Yukiko, 21-2-1-504, Matsushiro 4-chome, Tsukuba, Ibaraki 305,
JP
PA Takeda Chemical Industries, Ltd., 1-1 Doshomachi 4-chome, Chuo-ku,
Osaka-shi, Osaka 541, JP
SO Wila-EPZ-1998-H08-T1a
DS R AT; R BE; R CH; R DE; R DK; R ES; R FI; R FR; R GB; R GR; R IE; R IT;
R LI; R LU; R MC; R NL; R PT; R SE
PIT EPA2 EUROPÄISCHE PATENTANMELDUNG
PI EP 824149 A2 19980218
OD 19980218
AI EP 1997-113934 19970813
PRAI JP 1996-213944 19960813
IC ICM C12N015-54
ICS C12N009-10 A61K038-45 C07K016-40 C12Q001-48
ICA C12Q001-68.
A01K067-027

L14 ANSWER 12 OF 33 CAPIUS COPYRIGHT 2002 ACS

AN 1987:534659 CAPIUS
DN 107:134659
TI **Synthesis and biological properties of N3-(4-methoxyfumaroyl)-L-2,3-diaminopropanoic acid dipeptides. A novel group of antimicrobial agents**
AU Andruszkiewicz, Ryszard; Chmara, Henryk; Milewski, Slawomir; Borowski, Edward
CS Dep. Pharm. Technol. Biochem., Tech. Univ. Gdansk, Gdansk, 80-952, Pol.
SO J. Med. Chem. (1987), 30(10), 1715-19
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
OS CASREACT 107:134659

L14 ANSWER 13 OF 33 DGENE (C) 2002 THOMSON DERWENT

AN AAY58827 Protein DGENE
TI **Fermentation of E. coli having an altered amino acid sugar metabolic pathway to produce glucosamine, especially using novel recombinant variant glucosamine-6-phosphate synthases -**
IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715

PRAI US 1998-115475 19980715

DT Patent

LA English

OS 2000-182441 [16]

L14 ANSWER 14 OF 33 DGENE (C) 2002 THOMSON DERWENT

AN AAY58826 Protein DGENE

TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -

IN Berry A; Burlingame R P; Millis J R

PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.

PI WO 2000004182 A1 20000127 150p

AI WO 1999-US15976 19990715

PRAI US 1998-115475 19980715

DT Patent

LA English

OS 2000-182441 [16]

L14 ANSWER 15 OF 33 DGENE (C) 2002 THOMSON DERWENT

AN AAY58825 Protein DGENE

TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -

IN Berry A; Burlingame R P; Millis J R

PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.

PI WO 2000004182 A1 20000127 150p

AI WO 1999-US15976 19990715

PRAI US 1998-115475 19980715

DT Patent

LA English

OS 2000-182441 [16]

L14 ANSWER 16 OF 33 DGENE (C) 2002 THOMSON DERWENT

AN AAY58824 Protein DGENE

TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -

IN Berry A; Burlingame R P; Millis J R

PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.

PI WO 2000004182 A1 20000127 150p

AI WO 1999-US15976 19990715

PRAI US 1998-115475 19980715

DT Patent

LA English

OS 2000-182441 [16]

L14 ANSWER 17 OF 33 DGENE (C) 2002 THOMSON DERWENT

AN AAY58823 Protein DGENE

TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -

IN Berry A; Burlingame R P; Millis J R

PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.

PI WO 2000004182 A1 20000127 150p

AI WO 1999-US15976 19990715

PRAI US 1998-115475 19980715

DT Patent

LA English

OS 2000-182441 [16]

L14 ANSWER 18 OF 33 DGENE (C) 2002 THOMSON DERWENT

AN AAY58822 Protein DGENE

TI . **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -
IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 19 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAZ58258 DNA DGENE
TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -
IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 20 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAZ58257 DNA DGENE
TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -
IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 21 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAZ58256 DNA DGENE
TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -
IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 22 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAZ58255 DNA DGENE
TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -
IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p

AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 23 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAZ58254 DNA DGENE
TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -

IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 24 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAZ58253 DNA DGENE
TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -

IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 25 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAZ58252 DNA DGENE
TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -

IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 26 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAZ58251 DNA DGENE
TI **Fermentation** of *E. coli* having an altered amino acid sugar metabolic pathway to produce **glucosamine**, especially using novel recombinant variant **glucosamine-6-phosphate synthases** -

IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 27 OF 33 DGENE (C) 2002 THOMSON DERWENT

AN AAZ58250 DNA DGENE
TI **Fermentation of E. coli having an altered amino acid sugar metabolic pathway to produce glucosamine, especially using novel recombinant variant glucosamine-6-phosphate synthases -**
IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 28 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAZ58249 DNA DGENE

TI **Fermentation of E. coli having an altered amino acid sugar metabolic pathway to produce glucosamine, especially using novel recombinant variant glucosamine-6-phosphate synthases -**
IN Berry A; Burlingame R P; Millis J R
PA (DCVB-N) DCV INC DBA BIO-TECH RESOURCES.
PI WO 2000004182 A1 20000127 150p
AI WO 1999-US15976 19990715
PRAI US 1998-115475 19980715
DT Patent
LA English
OS 2000-182441 [16]

L14 ANSWER 29 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAV45208 DNA DGENE

TI **Fermentative production of N-glucosamine from genetically modified microorganism - having altered amino sugar metabolism, particularly transformed with gene for N-glucosamine-6-phosphate synthase, useful for treatment of osteoarthritic disorders**
IN Berry A; Burlingame R P; Millis J R
PA (BIOT-N) BIO TECH RESOURCES.
PI WO 9830713 A1 19980716 90p
AI WO 1998-US800 19980114
PRAI US 1997-35494 19970114
DT Patent
LA English
OS 1998-399157 [34]

L14 ANSWER 30 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAV45207 DNA DGENE

TI **Fermentative production of N-glucosamine from genetically modified microorganism - having altered amino sugar metabolism, particularly transformed with gene for N-glucosamine-6-phosphate synthase, useful for treatment of osteoarthritic disorders**
IN Berry A; Burlingame R P; Millis J R
PA (BIOT-N) BIO TECH RESOURCES.
PI WO 9830713 A1 19980716 90p
AI WO 1998-US800 19980114
PRAI US 1997-35494 19970114
DT Patent
LA English
OS 1998-399157 [34]

L14 ANSWER 31 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAV45206 DNA DGENE

TI **Fermentative production of N-glucosamine from genetically modified microorganism - having altered amino sugar metabolism, particularly transformed with gene for N-glucosamine-6-phosphate synthase, useful for treatment**

of osteoarthritic disorders
IN Berry A; Burlingame R P; Millis J R
PA (BIOT-N) BIO TECH RESOURCES.
PI WO 9830713 A1 19980716 90p
AI WO 1998-US800 19980114
PRAI US 1997-35494 19970114
DT Patent
LA English
OS 1998-399157 [34]

L14 ANSWER 32 OF 33 DGENE (C) 2002 THOMSON DERWENT
AN AAV45205 DNA DGENE
TI **Fermentative** production of **N-glucosamine** from
genetically modified **microorganism** - having altered amino sugar
metabolism, particularly transformed with gene for **N-glucosamine**
-6-phosphate synthase, useful for treatment
of osteoarthritic disorders

IN Berry A; Burlingame R P; Millis J R
PA (BIOT-N) BIO TECH RESOURCES.
PI WO 9830713 A1 19980716 90p
AI WO 1998-US800 19980114
PRAI US 1997-35494 19970114
DT Patent
LA English
OS 1998-399157 [34]

L14 ANSWER 33 OF 33 DPCI (C) 2002 THOMSON DERWENT
AN 1998-399157 [34] DPCI
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DNC C1998-120998
TI **Fermentative** production of **N-glucosamine** from
genetically modified **microorganism** - having altered amino sugar
metabolism, particularly transformed with gene for **N-glucosamine**
-6-phosphate synthase, useful for treatment
of osteoarthritic disorders.
DC B03 C02 D16
IN BERRY, A; BURLINGAME, R P; MILLIS, J R
PA (BIOT-N) BIO TECH RESOURCES; (ARKI-N) ARKION LIFE SCI LLC
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FDT AU 9859604 A Based on WO 9830713
PRAI US 1997-35494P 19970114; US 1998-115475 19980715
IC ICM C12P019-00; C12P019-26
ICS C12N001-00; C12N001-21
FS CPI

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PNC.D 0 Cited Patents Count
PNC.G 0 Citing Patents Count
CRC.I 0 Cited Literature References Count (by inventor)
CRC.X 8 Cited Literature References Count (by examiner)

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| WO 9830713 | A Ex | MOLECULAR MICROBIOLOGY, 1995, Vol. 17, No. 1, FERNANDEZ-HERRERO et al., "GlmS of Thermus Thermophilus HB8: an Essential Gene for Cell-Wall Synthesis Identified Immediately Upstream of the S-Layer Gene", pages 1-12. | | |
| WO 9830713 | A Ex | BIOCHIMIE, 1988, Vol. 70, DUTKA-MALEN et al., "Molecular Cloning and Overexpression of the Glucosamine Synthetase Gene from Escherichia Coli", pages 287-290. | | |
| WO 9830713 | A Ex | MOLECULAR MICROBIOLOGY, 1992, Vol. 6, No. 7, MARIE et al., "Rhizobium Leguminosarum Has Two Glucosamine Synthases, GlmS and NodM, Required for Nodulation and Development of Nitrogen-Fixing Nodules", pages 843-851. | | |
| WO 9830713 | A Ex | JOURNAL OF BIOLOGICAL CHEMISTRY, 15 December 1992, Vol. 267, No. 30, McKNIGHT et al., "Molecular Cloning, cDNA Sequence and Bacterial Expression of Human Glutamine:Fructose-6-Phosphate Amidotransferase", pages 25208-25212, XP002912166 | | |
| WO 9830713 | A Ex | MOLECULAR MICROBIOLOGY, 1995, Vol. 17, No. 1, FERNANDEZ-HERRERO et al., "GlmS of Thermus Thermophilus HB8: an Essential Gene for Cell-Wall Synthesis Identified Immediately Upstream of the S-Layer Gene", pages 1-12, XP002912167 | | |
| WO 9830713 | A Ex | BIOCHIMIE, 1988, Vol. 70, DUTKA-MALEN et al., "Molecular Cloning and Overexpression of the Glucosamine Synthetase Gene from Escherichia Coli", pages 287-290, XP002912168 | | |
| WO 9830713 | A Ex | MOLECULAR MICROBIOLOGY, 1992, Vol. 6, No. 7, MARIE et al., "Rhizobium Leguminosarum Has Two Glucosamine Synthases, GlmS and NodM, Required for Nodulation and Development of Nitrogen-Fixing Nodules", pages 843-851, XP002912169 | | |